Notebook, N-11-11-05.2

8110
Acme Co.,
MFG. STATIONERS,
69 FULTON STREET,
NEW YORK.

Longtickers
Ends Crash

Reg goes up
86 Milam capacity
on 50th Run above
1st Coll [illegible] =
about 4%

460
124

25
85
125
200
2112
4
8148

8.48
2

2 12
2
4.24

424
4
16.96

4)1085
271
85
355
168
2
2130
3
765

Goldstein 343 4f. 47.8 158D	8085 7970	3381 3382	1220 1220
Goldstein 330. 4f 48— 154D	7912 7903	3383 3384	1227 1243
Goldstein 350. 4 48 150D	7745 7687	3385 3386	1197 1193
Goldstein 355 1123f 4 48 130D [illegible]	6567 6412	3387 3388	1250 1230
Goldstein 356 4f 47.5 135D	6675 6792	3389 3390	1230 1167
Goldstein 357 4f 48— 137D	6922 6853	3391 3392	1257 1260
Goldstein 358 4 —48— 145D	7245 7255	3393 3394	1227 1247
Goldstein 361 4 ~~4~~ 48 138D	7093 6946	3395 3396	1247 1237
Ra 1154 Reg 271D	7341 7438	3397 3398	1183 1220

1347 1307	1360 1320	400 400						
1333 1357	1347 1370	393 420						
1287 1283	1317 1317	400 410						
1290 1287	1313 1310	390 437	1307 1287	1320 1307	453 457	1263 1243	1290 1263	567 550
1290 1287	1307 1323	397 537	1283 1247	1293 1327	370 550			
1283 1317	1300 1330	393 387	1263 1307	1287 1327	420 450		2)2600 13	
1280 1367	1297 1377	353 370	1267 1380	1287 1397	423 537		2)2647 1323	
1310 1290	1320 1303	353 317	1293 1267	1327 1283	477 427	1263 1243	1283 1270	553 557
1287 1363	1310 1377	450 587						

Ra 1155 Reg 262 D	7441 7430	3399 3400	1220 1217	1287 1287	1297 1300	440 490
Ra 1156 Reg 265 D	7412 7386	3401 3402	1173 1200	1250 1233	1263 1250	477 453
Ra 1157 Reg 263 D	7490 7459	3403 3404	1183 1177	1273 1340	1293 1367	480 567
Ra 1158 Reg 258 D	7298 7364	3405 3406	1133 1160	1223 1260	1243 1283	460 483
Ra 1159 Reg 262 D	7480 7470	3407 3408	1110 1160	1220 1260	1243 1280	497 513
Ra 1160 Reg 273 D	7475 7465	3409 3410	1160 1143	1210 1207	1243 1260	477 513
Ra 1161 Reg 269 D	7440 7435	3411 3412	1150 1133	1260 1220	1273 1243	563 477

7 2 1154 [illegible] 5 lb cut 30 dumps 9,932 — 4575

Dup but 3½ cut 9 448 — 4576

Dup but 2 lb cut 8 943 — 4577

1½ lb + 6 [illegible] flake each dump 7,500 # 600 [illegible] — 4582

4583

2 measure here

4582 - 50th run Ni tubes all bent, new Ni - only gave ½ minutes -

4583 was perfect —

50	100 300 1	100 ½ v.
3200 800 2250 750	2900	4280
3100 300 2200 750	2805	4240
2975 300 2187 750	2730	4125
750 300 300 750		
1145 300 207 750		

4580 + 81
chg & dis twice then chg & taken out allowed to self heat till cold, wash out KOH dry + repress 300 at.

4578-79
5 gm per pkt chg + dis
leave then chg full + remove from bell
Recompute quickly + at 300 at + put back
Run Reg

Lot 30 Ni flake: 854 5.1 24.2 260D 7651 7745	3413 3414	1180 1197	~~1237~~ ~~1270~~	~~1243~~ ~~1283~~	~~453~~ ~~453~~	~~1273~~ ~~1313~~	~~1290~~ ~~1330~~	~~390~~ ~~450~~	✓
Ra 1129 30 Ni flake 4.7 47. 151 - 7559 7573	3415 3416	1223 1243	~~1343~~ ~~1367~~	~~1357~~ ~~1380~~	~~490~~ ~~513~~	✓			
Lot 31 Ni flake 1129 4.2 47 - 7433 [illegible] temp - 7473	3417 3418	1240 1260	~~1377~~ ~~1390~~	~~1397~~ ~~1397~~	~~540~~ ~~543~~	✓			
Lot 31 f 854 - 4.9 23.7 . 264D 7449 7459	3419 3420	1207 1217	~~1263~~ ~~1260~~	~~1280~~ ~~1273~~	~~520~~ ~~563~~	~~1303~~ ~~1287~~	~~1323~~ ~~1310~~	~~450~~ ~~438~~	✓
Ra 1162 Req 275D 1123 f - 4.3 23.9 7509 7487	3421 3422	1180 1177	~~1250~~ ~~1270~~	~~1263~~ ~~1283~~	~~487~~ ~~537~~	✓			
Ra 1163 Req 274D 4.3 23.8 7505 7417	3423 3424	1193 1153	~~1270~~ ~~1250~~	~~1283~~ ~~1263~~	~~463~~ ~~457~~	✓			
Ra 1164 Req 264D 4.3 24 7525 7483	3425 3426	1167 1190	~~1223~~ ~~1223~~	~~1247~~ ~~1287~~	~~457~~ ~~460~~	✓			
Ra 1165 - Req 269D 4.3 23.8 7470 7507	3427 3428	1173 1187	~~1220~~ ~~1240~~	~~1240~~ ~~1253~~	~~397~~ ~~467~~	✓			
Ra 1166 Req 262D 4.3 24.2 7404 7480	3429 3430	1180 1137	~~1260~~ ~~1223~~	~~1277~~ ~~1247~~	~~539~~ ~~483~~	✓			

See Beyond

Ra 1167 Reg 264D 4.3 23.7	7372 7400	3431 3432	1137 1163
Ra 1168 Reg 269D 4.3 23.8	7467 7507	3433 3434	1133 1143
854 - 1123 f 4.3 24.2 Dipped tubes in thick film dope, dried & dipped again, dipped in & out quick, so not dissolve 1st Coat 25[illegible]D	7631 7626	3435 3436	1153 1170
Ra 1169 Reg 268D 4.3 23.9	7491 7513	3437 3438	1133 1087
Ra 1170 Reg 262D	7418 7463	3439 3440	1200 1190
Ra 1141 Not coated at Bailey wks Sample from Bailey 1123 f 4.3 23.7 274D	7447 7446	3441 3442	1147 1157
Dup of 3441 Except Exposed to: Atmosphere in Gals room 24 hours 1123 f 4.3 24 - 268D	7346 7422	3443 3444	1183 1117
854 - 1123 f 4.2 241 Irons of this group clgd [illegible] reversed bath 15 hours at 400 Ma per pocket for 3 complete runs in 21K by Hallamp 262D	7338 7382 7382	3445 3446 3447	1243 1193 1220

Goldstiens numbers

	NaOH	$NiSO_4$	Evapor. H_2O					
100	530	690	490	177	510	690	320	
101	540		550	178	520		320	
102	500	"	485	180	500	"	290	182 is Goldstein Reg given only boiled short time -
103	500		460	181	510	"	380	
104	510		495	182	520		340	
105	520		505	183	530	"	370	
106	530		490	184	500		340	
107	530	"	460	185	510	"	355	good [illegible] good
108	500		410	186	520		430	
109	510		500	187	530	"	405	
110	520	"	430	192	500	"	430	
111	530		445	193	510		410	
112	500	"	430	194	520	"	485	good -
113	510		445	195	530		460	
114	500		480	212	520	"	390	
115	510	"	475	213	530		360	
116	500		480	218	520	"	410	
117	510	"	480	219	530		420	
118	520		490	220	540	"	430	
119	530		445	221	550		485	
120	540		425	222	530		400	
121	510		485	223	530	"	365	
122	540	"	480	224	540		415	
123	550		390	225	520	"	460	
124	520		520	226	530		470	
125	530		500	227	540	"	470	
126	530		480	228	550		485	
127	530		445	229	520		425	
129	520	"	475	230	530	"	420	
131	530		530	231	540		415	
133	530		435	232	550	"	420	
134	530		430	233	520		460	
136	540		350	234	530	"	420	
138	520	"	410	235	520		445	
145	550		310	236	530	"	430	
146	510		320	237	540		485	
147	520		345	238	550	"	510	
156	520		465	239	520		435	
157	530	"	460	240	530	"	415	
170	510		490	241	540	"	405	
171	520		490	242	550	"	430	
176	500	"	320	243	500	"	440	
				244	510	"	450	
				245	520	"	450	

246	530	690	440	291	500	690	405
247	500		415	292	510		410
248	510		420	293	520		415
249	520		460	294	530		395
250	530		445	295	520		425
251	500		420	296	530		440
252	510		470	297	540		450
253	520		460	298	550		420
254	530		520	299	520		380
255	500		425	300	530		400
256	510		465	301	540		420
257	520		455	302	550		400
258	530		525	303	510		395
259	500		450	304	520		410
260	510		435	305	530		410
261	520		455	306	540		410
262	530		455	307	510		430
263	520		430	308	520		420
264	530		455	309	530		425
265	540		465	310	540		450
266	550		425	311	520		400
267	530		430	312	530		410
268	530		430	313	540		390
269	530		420	314	550		440
270	530		400	315	520		390
271	500		430	316	530		405
272	510		445	317	540		405
273	520		445	318	550		395
274	530		465	319	510		390
275	520		390	320	520		410
276	530		415	321	530		435
277	540		420	322	540		400
278	550		450	323	500		385
279	520		415	324	510		375
280	530		430	325	520		370
281	540		410	326	530		390
282	550		425	327	520		390
283	500		395	328	530		390
284	510		415	329	540		390
285	520		455	330	550		380
286	530		415	331	520		405
287	500		405	332	530		395
288	510		440	333	540		390
289	520		470	334	550		415
290	530		480	335	520		390
				336	520		395

Dr Grothes analyses was correct
in the 737- soaked most Conc Bi
Goldstein gives 20.28% BiOCl
or 20.24% $Bi(OH)_3$
16.26 Metal Bi

337	520	690	420
338	520		395
339	530	|	395
340	530		395
341	530	|	395
342	530		400
343	540	|	375
344	540		375
345	540	|	385
346	540		375
347	550		400
348	550	|	400
349	550		400
350	550		395
351	520	|	400
352	520		410
353	520		420
354	520	|	400
355	500		380
356	500		375
357	500	|	400
358	500		375
359	530		400
360	530		395
361	530		400
362	530	|	400
363	520		385
364	520		385
365	520		380
366	520		390
367	530	|	410
368	530		390
369	530		390
370	530	|	410
371	530		390
372	530	:	400
373	530		400
374	530	|	400
375	530		400
376	530	|	400
377	530		400
378	530		410

379	530	690	350
380	"		350
1	"	|	"
2	"		"
3	"		355
4	"	|	360
5	"	|	"
6	"		375
7	520		360
388	"	|	355
389	"		360
390	"		355
1	530	|	370
2	"		375
3	"		370
4	540		370
5	"		375
6	"		"
7	"		385
8	550		370
9	"		380
400	"		370
401	"		380
402	520		365
3	"		"
4	"		"
5	"		"
6	560		370
7	"		390
8	560		380
9	"		370
410	500		350
11	"		"
12	"		355
13	"		380
14	510		365
15	"		"
16	"		"
17	"		370
18	520		375
19	"		"
20	"		"
21	"		380
22	530		380
23	"		375
24	"		"
425	"		370

Seeback

	50	½	H	100	½	IT			
3431	1223	1240	548						
3432	1260	1273	530						
3433	1240	1253	480						
3434	1257	1277	480						
3435	1237	1253	450	1300	1323	460	1247	1277	497
3436	1257	1273	527	1343	1360	443	1277	1317	603
3437	1170	1193	567						
3438	1247	1257	713						
3439	1297	1313	460						
3440	1293	1310	437						
3441	1283	1290	420						
3442	1287	1297	423						
3443	1293	1313	393						
3444	1240	1253	383						
3445									
3445	1353	1363	433	1310	1333	583	1290	1320	690
3446	1280	1290	393	1257	1263	550	1347	1367	653
3447	1313	1323	387	1267	1290	547	1283	1310	590

	200		
3435	1247	1273	687
3436	1283	1323	687

3445	1300	1347	630
46	1287	1330	657
47	1287	1327	627

Dup of 3445 Except rows were changed + reversed in Z1KZ &10th.	264D	7352 7385 7300	3448	1213	1300	1313	413	1267	1290	570	1290	1320	653
			3449	1197	1280	1290	427	1253	1260	527	1267	1283	597
			3450	1210	1330	1353	530	1283	1310	597	1297	1323	687
Dup of 3445 Except word 1129 (1164) nickel 4.3 24.2 1123f–	285D	8206– 8205– 8186	3451	1083	1183	1193	343	1187	1220	423	1250	1260	587
			3452	1087	1227	1240	360	1230	1247	457	1267	1287	567
			3453	1130	1240	1253	360	1267	1283	430	1267	1293	560
Dup of 3448 Except word 1129	283D	8140 8122 8113	3454	1063	1133	1160	333	1107	1127	420	1177	1190	470
			3455	1113	1220	1230	347	1227	1243	427	1267	1280	557
			3456	1133	1250	1257	350	1227	1247	417	1267	1280	557
Lot 32 n.f 1129 green 4.8 24.2	267D	8075– 8126	3457	1130	1257	1273	343	1267	1297	407	0		
			3458	1130	1263	1263	323	1267	1290	413			
Lot 32 flake. 854– 4.8 23.8	268D	7445– 7453	3459	1203	1327	1333	383	1300	1327	517	1		
			3460	1210	1367	1383	403	1320	1343	517			
RA 1171 Reg	267D	7311 7383	3461	1163	1280	1290	357	0					
			3462	1187	1310	1320	300						

3448	1267	1323	653
3449	1280	1303	647
3450	1283	1327	703
3451	1200	1223	460
3452	1267	1293	547
3453	1267	1290	553
3454	1133	1200	483
3455	1250	1293	593
3456	1277	1313	653

RA 1172 Reg	263 D	7337 7404	3463 3464	1170 1170	~~1277~~ ~~1260~~	~~1290~~ ~~1273~~	~~417~~ ~~373~~
Ra 1173 Reg	260 D	7342 7323	3465 3466	1190 1190	~~1253~~ ~~1260~~	~~1260~~ ~~1267~~	~~340~~ ~~360~~
RA 1141 Reg washed - from Dalley Stood in atmosphere 48 in Galv room	266 D	7353 7395	3467 3468	1163 1177	~~1190~~ ~~1257~~	~~1200~~ ~~1263~~	~~383~~ ~~383~~
Ra 1174 Reg 249	262 D	7253 7260	3469 3470	1157 1127	~~1253~~ ~~1260~~	~~1260~~ ~~1267~~	~~337~~ ~~353~~
Ra 1175 Reg - 248	257 D	7224 7241	3471 3472	1210 1190	~~1267~~ ~~1280~~	~~1283~~ ~~1290~~	~~380~~ ~~420~~
Ra 1176 Reg 248	260 D	7297 7323	3473 3474	1190 1190	~~1280~~ ~~1283~~	~~1293~~ ~~1293~~	~~407~~ ~~430~~
Ra 1177 Reg 4.2 28.7	271 D	7357 7360	3475 3476	1140 1127	~~1253~~ ~~1250~~	~~1263~~ ~~1260~~	~~440~~ ~~468~~
854 Exposed in Galv room 1 day 4.2 23.8	266 D	7352 7363	3477 3478	1213 1207	~~1290~~ ~~1293~~	~~1297~~ ~~1303~~	~~455~~ ~~460~~
Dup 3477 Exposed 3 days 4.2 24	257 D	7482 7474	3479 3480	1223 1200	~~1280~~ ~~1250~~	~~1290~~ ~~1257~~	~~443~~ ~~423~~

					50			100			150		
Dlep 3477 Exposed 1 week	268 D	7 673 7 700	3481 3482	1237 1237	1307 1297	1317 1310	460 433	1290 1290	1310 1313	513 493	1280 1283	1307 1320	400 657
Ra 1129 (1164) mixed with 10% BiOH hydrous Home 30 on 190– 1123f 4.2 24.1	300 D	8391 8486 8438	3483 3484 3485	1083 1093 1093	1430 1450 1467	1483 1530 1530	1037 977 920	1417 1443 1457	1483 1563 1533	1110 1000 1023	1530 1533 1533	1597 1627 1607	853 920 920
Dlep of 3483 Except 854	277 D 5432 green	7 557 7 618 7 695	3486 3487 3488	1227 1220 1250	1437 1393 1440	1460 1423 1457	950 1100 957	1413 1457 1467	1450 1523 1493	897 890 967	1427 1487 1433	1463 1527 1463	880 1000 1010
Ra 1178 Reg 4.2 23.9 Some black kernels	272 D	7521 7540	3489 3490	1100 1157	1267 1267	1277 1283	397 420						
Ra 1179 Reg	263 D	7405 7367	3491 3492	1107 1107	1263 1263	1267 1277	437 443						
Ra 1180 Reg	265 D	7394 7391	3493 3494	1190 1160	1247 1243	1257 1253	407 407						
Ra 1181 Reg	270	7466 7510	3495 3496	1147 1147	1200 1213	1227 1230	420 393						
Ra 1141 Reg Wash - Exposed atmosphere 168 hours	276 D	7406 7400	3497 3498	1100 1093	1213 1200	1230 1213	430 383						

				250	1/2	1t	300	1/2	1t	Run twice more		350	1/2	Ft
3481	1277	1340	803	1283	1343	627								
3482	1283	1353	747	1300	1317	627								
3483	1573	1690	960	1587	1657	1180	1497	1673	1057	1600	1673	1593	1660	1073
3484	1563	1690	960	1580	1693	1087	1530	1733	1003	1633	1733	1620	1680	1130
3485	1593	1690	987	1593	1690	1057	1583	1733	933	1643	1733	1617	1687	1043
3486	1393	1537	970	1363	1503	947	1287	1553	933	1427	1557	1353	1480	1040
3487	1507	1627	1000	1520	1590	1063	1490	1650	1003	1593	1650	1467	1567	1010
3488	1597	1660	1017	1570	1617	1267	1507	1600	1060	1567	1607	1543	1617	1110

1164 Heavy green ng

400'

1st
1127
1137
1133

3483	1543	1620	1100	1400	1477	Bad burned 5 Rings broken
3484	1570	1633	1023	1430	1517	Burnt 2 Rings
3485	1620	1687	1097	1430	1577	Bad burned 4 Rings
3486	1333	1467	923	1313	1487	1000
3487	1483	1590	1090	1460	1550	1020
3488	1567	1630	1063	1500	1583	1113

1327	1493	923
1480	1583	940
1517	1617	973

854 Exposed Galvo room 2 weeks 269 D 7,530 7,680	3499 3500	1223 1243	~~1290~~ ~~1323~~	~~1300~~ ~~1333~~	~~437~~ ~~263~~
854 – 2 grms TIN connected to Each tube in cup by John Ott – 258 D – 7331 – 7415 –	3501 3502	1230 1203	~~1133~~ ~~1160~~	~~1147~~ ~~1177~~	~~413~~ ~~768~~
Dup 3501 Except 2 grms Tin + 2 gm Bismuth Connected to each tube –	3503 3504	1223 1240	~~1140~~ ~~1187~~	~~1167~~ ~~1200~~	~~733~~ ~~733~~
Dup 3501 Except 2 grms LEAD Connected Each tube · *short ckted	3505 3506	360* 1217	~~877~~ ~~1330~~	~~930~~ ~~1333~~	~~267~~ ~~267~~
Dup of 3505 Except 2 grm LEAD + 2 grm BISMUTH connected Each tube	3507 3508	1227 1213	~~1320~~ ~~1330~~	~~1330~~ ~~1337~~	~~270~~ ~~270~~
854 – 2 grms ARSENIC fastened Each tube	3509 3510	1213 1213	~~1267~~ ~~1283~~	~~1283~~ ~~1293~~	~~467~~ ~~467~~
Dup 3509 Except 2 gr ARSENIC + 2 gr BISMUTH fastened Each tube	3511 3512	1210 1247	~~1317~~ ~~1300~~	~~1330~~ ~~1310~~	~~533~~ ~~507~~
RA 1182 Reg 254 D 7328 7366	3513 3514	1143 1127	~~1243~~ ~~1247~~	~~1253~~ ~~1257~~	~~490~~ ~~517~~
Ra 1183 Reg 253 7320 7346	3515 3516	1150 1147	~~1220~~ ~~1213~~	~~1230~~ ~~1223~~	~~460~~ ~~407~~

Mch 26

Ra 1184 Reg 268 D	7420 7420	3517 3518	1163 1153	~~1247~~ ~~1230~~	~~1257~~ ~~1240~~	~~427~~ ~~383~~							
Ra 1185 Reg 259 D	7390 7435	3519 3520	1150 1157	~~1213~~ ~~1230~~	~~1223~~ ~~1237~~	~~367~~ ~~337~~							
Lot 33 Flake 854 – 4.7 f 23.9 265 D	7359 7400	3521 3522	1190 1193	~~1267~~ ~~1310~~	~~1277~~ ~~1323~~	~~390~~ ~~380~~							
Dup 3521 Except 1129 (1164) 249 D Dump G then f.s. –	7802 7773	3523 3524	1207 1237	~~1317~~ ~~1327~~	~~1327~~ ~~1343~~	~~323~~ ~~300~~							
Ra 1129 (1141) 2 grms Bismuth fastened to Each tube – 4 f 27.5 246 D	7678 7773	3525 3526	1200 1177	1293 1290	1307 1303	290 290	1290 1287	1313 1303	400 407	1320 1333	1347 1353	660 657	
854 – 1123 f 4.2 241 2 grm ANTIMONY Connected to Each tube — 258 D	7471 7454	3527 3528	1240 1233	1323 1257	1330 1270	303 170	1267 1263	1283 1217	577 560	1267 1243	1283 1253	770 647	
Dup 3527 – Except 2 gm Antimony + 2 grms Bi riveted to Each tube 265 D	7454 7498	3529 3530	1160 1260	1227 1267	1237 1277	170 310	1187 1317	1197 1327	607 477	1247 1307	1257 1327	[illegible] 647	
Ra 1141 Reg Washed by Dally Exposed 2 weeks 269 D	7350 7445	3531 3532	1157 1163	~~1210~~ ~~1177~~	~~1223~~ ~~1190~~	~~297~~ ~~300~~							
Goldsteins 170 – 4 f 26.6 green Dump G then f then Tamp –	7800 7755	3533 3534	1220 1197	~~1303~~ ~~1317~~	~~1317~~ ~~1330~~	~~297~~ ~~300~~							

3525	1340	1377	633	1267	1427	447	0
3526	1347	1387	647	1390	1433	473	0

Goldstein acc 27 G. + dump 9 Chem f1

Irons chgd against Ni strip in 21K at 120 to 130 Fahr in 24 hours at 400 per pkt. reversed in same D of same lamp 24 hours same rate. Sol thrown away strip cleaned, chgd at room temp 15 hours 400 ma in 21K 2 Li — as per Holland instruct.

1854 — Exposed 3 weeks 266 D	7457 7380	3535 3536	1200 1193	1303 1273	1317 1293	420 403						
Goldsteins 171 — 240 D 4f 27 G — Dump G+f	7433 7463	3537 3538	1200 1200	1347 1323	1363 1333	423 403	1300 1313	1317 1327	327 347	1320 1313	1343 1333	540 510
Goldstein 178 252 D 27 green 4f	7645 7638	3539 3540	1227 1193	1367 1307	1387 1320	327 297	1360 1300	1380 1330	323 363	1357 1313	1373 1327	510 527
Goldstein 181 259 D	7757 7741	3541 3542	1200 1200	1293 1307	1320 1323	303 303						
Goldstein 182 255 D	7670 7678	3543 3544	1230 1240	1323 1317	1340 1333	300 293						
Goldstein 183. 260 D	7855 7854	3545 3546	1227 1240	1397 1420	1427 1437	317 320	1383 1387	1407 1413	480 510	1393 1400	1397 1423	627 593
Goldstein 185 249 D	7368 7410	3547 3548	1227 1227	1420 1317	1440 1330	320 307	1363 1317	1393 1333	543 543	1360 1327	1390 1347	620 517
Goldstein 194 246 D 4 | 26.8 Dump 9 Chem f —	7364 7313	3549 3550	1133 1090	1320 1287	1340 1313	270 240						

Note 3549 thereafter Fe chgd & Reversed as per instructions given by Holland

Note low vol & capacity

							300	c/2	St
3545	1417	1450	650	1427	1510	560	1460	1633	783
3546	1417	1447	697	1443	1527	573	1443	1567	760
3547	1353	1390	663	1397	1507	600	1367	1550	727
3548	1337	1363	627	1350	1423	567	1260	1440	613

Ra 1186 Reg 263D	7533 7544	3551 3552	1133 1117	1233 1270	1243 1290	357 400	✓
Ra 1187 Reg 278D	7636 7607	3553 3554	1110 1110	1323 1257	1337 1270	390 400	✓
Ra 1188 Reg 264D	7580 7516	3555 3556	1163 1183	1240 1303	1247 1317	410 437	✓
Ra 1189 Reg 276D	7721 7662	3557 3558	1170 1183	1257 1240	1267 1247	397 393	✓
Ra 1190 Reg 273D.	7609 7582	3559 3560	1177 1180	1200 1273	1213 1237	360 358	✓
Ra 1191 Reg 273D	7565 4570	3561 3562	1187 1167	1197 1210	1210 1223	317 343	✓
Ra 1192 Reg 264D	7552 7607	3563 3564	1170 1170	1197 1216	1210 1223	317 317	✓
Ra 1193 Reg 272D	7522 7557	3565 3566	1093 1220	1177 1180	1187 1293	317 357	✓

Ra 1194-Req 267D	7576 7577	3567 3568	1167 1140	1287 1237	1303 1250	433 400				
Ra 1195 Req 260	7520 7512	3569 3570	1097 1100	1190 1233	1200 1243	397 477				
Ra 1196 Req 271D	7473 7464	3571 3572	1140 1187	1227 1230	1237 1240	433 427				
Ra 1197 Req 262D	7477 7466	3573 3574	1100 1137	1143 1217	1153 1227	387 463				
Ra 1198 Req 270D	7455 7526	3575 3576	1150 1127	1250 1248	1260 1250	433 367				
Ra 1199 Req 275D	7602 7538	3577 3578	1180 1127	1190 1160	1200 1170	323 317				
Ra 1200 Req 269D	7624 7614	3579 3580	1197 1180	1217 1180	1227 1187	317 320				
854 – 1128f 4.3 2618 – Radium material filled 210 } D 206 in Each tube except 1/8 inch at Each end – balance of 1/8 filled Carbonate Soda to allow mix to Expand Endurance — 800 mlg Na₂CO₃ Each tube —	6.335 6.312	3581 3582	957 950	993 1008	1007 1017	340 400	967 967	1000 1010	490 517	

~~Bd~~ Lot 34 flake – Ra 1129 (1164) f 4.2 27 – 256 D 7895 7864	3583 3584	1223 1237	1300 1333	1313 1353	343 413	7						
Lot 34 f 854 4.9 f 24G. 261 D 7485 7545	3585 3586	1213 1230	1277 1283	1263 1297	407 373	7						
854 – Tubes dipped very thick film dope 6 times – Each time held horizontal & blown upon so no drip 170 Mg dope on each tube when dry Holes all closed – no fines spilled them on loading when tubes taken from mould they came as clean as when put in 7245 7235 269 D 1123 f 4.3 23.7	3587 3588	1173 1150	1293 1283	1303 1293	430 438	7						
854 – Lot 15 f 6 mg 26.6 – BISMUTH mixed with 10% Anhydrous Bismuth Oxide thru 30 on 190 – damp 27 green 2 lamps – 246 D 7813 7792 Bad flake, want one of Bi makes it ok Bad flake	3589 3590	1217 1227	1420 1403	1440 1427	790 957	1467 1467	1557 1530	810 853	1507 1507	1527 1530	890 863	
Dup of 3589 – Except used 10% of Powdered Metallic Bismuth thru 80 mesh fines all in – 244 D 7801 7800 bad flake see 3589 remark BISMUTH Bad flake	3591 3592	1200 1150	1400 1407	1410 1423	747 840	1377 1433	1407 1477	827 827	1433 1480	1450 1497	857 863	

3589	1437	1483	997
3590	1450	1510	1083
3			
3591	1320	1390	887
3592	1437	1483	1108

854 - Lot 15 Ni f 6 - green 23.9 2 grms Bi metal to Each Tube - 235 D - 7588 7553 Bad flake - BISMUTH	3593 3594	1123 1193	1187 1263	1193 1273	370 420	1193 1240	1217 1260	593 593	1207 1253	1227 1267	483 570
Lot 35 Ni flake - 854 267 D 7483 4.8 f 23.9 7473	3595 3596	1210 1223	1253 1263	1260 1277	423 420	✓					
Lot 35 Ni f 1129 Green 27 - flake 3.8 7806 258 D 7981	3597 3598	1207 1220	1343 1353	1357 1393	407 443	✓					
Ferrate of Barium - $BaO Fe_2O_3 + H_2O$, from Goldstein 1123 f 4.2 23.8 of Ferrate soft crushed by fingers - 6587 238 D 6504	3599 3600	000 000	Cells reverse many on discharge								
Goldstein 434 $Ni(OH)_2$ with Silica in it - hard dull green very heavy 1/10% 8263 270 D 8184	3601 3602	1150 1163	1293 1297	1307 1310	397 397	1330 1330	1370 1370	520 520	1327 1310	1347 1323	510 467
Goldstein 435 $NiOH_2$ with Silica 4 f 27.3 green - Hard, some black heavy 8244 273 D 8257 2/10%	3603 3604	1177 1117	1310 1267	1383 1280	357 340	1323 1300	1380 1343	470 470	1317 1267	1330 1293	453 377

3593	1190	1223	623
3594	1217	1250	670

Goldstein 436 $NiOH_2$ with Silica in it 4. 261.9 273 D. Hand dull green heavy 1/2%	8241 8267	3605 3606	1177 1137	~~1297~~ ~~1290~~	~~1310~~ ~~1297~~	~~353~~ ~~353~~	~~1300~~ ~~1293~~	~~1340~~ ~~1327~~	~~480~~ ~~493~~	~~1250~~ ~~1267~~	~~1267~~ ~~1310~~	~~367~~ ~~387~~
Goldstein 437 $NiOH_2$ with Silica - 4 - 261.7 275 D 1% [illegible]	8196 8195	3607 3608	1157 1173	~~1310~~ ~~1293~~	~~1297~~ ~~1300~~	~~443~~ ~~447~~	~~1323~~ ~~1300~~	~~1347~~ ~~1320~~	~~453~~ ~~457~~			
1/10 % Alumina in green Goldstein 438 $NiOH_2$ with Alumina 4. 27.3 Hard dull green 272 D	8312 8240	3609 3610	1153 1187	~~1267~~ ~~1307~~	~~1280~~ ~~1320~~	~~447~~ ~~503~~	~~1300~~ ~~1327~~	~~1320~~ ~~1350~~	~~457~~ ~~430~~	15 d		
2/10 % Alumina in green Goldstein 439 $NiOH_2$ with Alumina - 275 D Hard, some black	8282 8286	3611 3612	1183 1173	~~1300~~ ~~1283~~	~~1320~~ ~~1307~~	~~523~~ ~~503~~	~~1317~~ ~~1303~~	~~1350~~ ~~1337~~	~~387~~ ~~393~~	~~1290~~ ~~1267~~	~~1307~~ ~~1280~~	~~440~~ ~~427~~
5/10 % Alumina in green. Goldstein 440 ($NiOH_2$) with Alumina - 283 D Hard gritty heavy	8350 8445	3613 3614	1160 1153	~~1283~~ ~~1283~~	~~1307~~ ~~1317~~	~~406~~ ~~417~~	~~1293~~ ~~1290~~	~~1337~~ ~~1353~~	~~393~~ ~~443~~	~~1273~~ ~~1287~~	~~1290~~ ~~1310~~	~~423~~ ~~467~~
Goldstein 441 $NiOH_2$ with Alumina - 276 D Hard gritty 1% Alumina in green - 10 grms in AA	8422 8366	3615 3616	1153 1177	~~1207~~ ~~1217~~	~~1257~~ ~~1270~~	~~450~~ ~~450~~	~~1240~~ ~~1160~~	~~1283~~ ~~1327~~	~~520~~ ~~500~~	~~1273~~ ~~1290~~	~~1307~~ ~~1307~~	~~460~~ ~~463~~
854 - 1123f - 43 24.1 2 gram Cadmium fastened Evap. tube - 258 D	7467 7326	3617 3618	1160 1183	~~1213~~ ~~1200~~	~~1227~~ ~~1220~~	~~457~~ ~~477~~	~~1237~~ ~~1220~~	~~1250~~ ~~1253~~	~~560~~ ~~607~~			

		April 1st						
Dup of 3617 Except. 2 grms Bismuth + 2 grms Cadmium Connected to Each tube –	3619	1217	1260	1290	517	1263	1300	650
	3620	1213	1263	1287	455	1280	1297	583
		8 Runs						
Hollands test for Fe. to get bad Stuff out – His numbers	–H–							
Regular to Treatment of Fe	1781A	1187						
	B	1187						
	C	1187						
1 Fe 5 grms 1 short N. Tube 854 1123 f 4.21 2412	average	1187						
Fe chgd at 75 Fahr once 15 hours at 400 mach	1782A	1200						
	B	1240						
	C	1187						
	Average	1209						
Fe changed at 130 F once	1783A	1150						
	B	1163						
	C	1200						
		1171						
Fe reversed at 75 F once 15 h at 400	1784A	1173						
	B	1170						
	C	1173						
		1172						
Fe Reversed at 130 F once	1785A	1153						
	B	1170						
	C	1190						
		1171						

H. Didnt notice any peculiarities on the charging Curves in the Fe Expmt

Fe charged & Then reversed once 75 Fahr	1786A	1197
	B	1200
	C	1197
		1198
at 75 F Fe charged & reversed 5 times changing both the Solutions & the nickel strip after Each reverse	1787A	1233
	B	1247
	C	1237
		1239
at 130 F Fes charged & reversed once	1788A	1260
	B	1260
	C	1207
		1242
at 130 F chgd & reversed 5 times changing both the sols & Ni strip after Each reverse	1789	1197
	B	1180
	C	1197
		1191
Fe charged 75 F. and reversed at 130 F once	1790	1227
	B	1193
	C	1197
		1206
Fe charged at 75 & reversed at 130 F 5 times changing Sol & Strip after Each reverse	1791	1180
	B	1193
	C	1220
		1198

7Es charged 130 & reversed 75 once —	1792 B C	1197 1223 1227 1216
7E charged 1307 & reversed at 757 5 times changing sol & strip after each reversal	1793 B C	1217 1217 1217 1217
at 757 7E charged & reversed then charged again, sol & strips being changed after the reverse.	1794 B C	1227 1233 11.90 1217
7E chgd at 1307 & reversed at 1307 then charged at 757 the sol & strips changed after reverse	1795 B C	1140 1177 1190 1149
Goldskin 442 Ni(OH)₂ with Cobalt in it, 4 27.3 1/10 % Cobalt in gram 8430 8390 grity hard & heavy 272 D	3621 3622	1137 1133
Goldskin 443 Ni~~(OH)~~₂ with Cobalt in it — 277 D 1.5 % Cobalt in gram 8201 8187 1123 f 4 — 26.6 —	3623 3624	1200 1190
854 43 241 2 grms Conducting Tungsten Bronze fastened each tube — 7437 7458 257 D	3625 3626	1163 1160

1223 1203	1257 1220	357 337	1277 1247	1303 1277	470 493	2)2524 1262		
1307 1277	1323 1297	340 340	1340 1297	1363 1313	520 463	1280 1293	1313 1313	457 467
1253 1267	1260 1287	500 600	1243 1280	1253 1303	500 608	2)2637 1319 2)2584 1292		

Dup of 3625 - Except 2 grms Bismuth & 2 grms Wo brong fastened Each Cube, 261 D -	3627 3628	1137 1160	1177 1197	1197 1210	317 330	1180 1197	1193 1220	483 503
854 -- 4.3 24.1 2 grms Cobalt fastened Each Cube 267 D	3629 3630	1160 1133	1200 1180	1233 1200	313 297	1197 1177	1227 1197	480 450
Dup 3629 - Except 2 grms Bismuth & 2 grms Cobalt fastened to Each Cube	3631 3632	1157 1157	1217 1203	1243 1243	310 300	1183 1200	1230 1247	493 513
Goldstein 444 Ni (Off) with Cobalt wt .4 2% 8390 8393 278 D ½% Cobalt gross	3633 3634	1227 1230	1327 1313	1350 1323	300 250	1353 1343	1377 1363	527 467
854 - 4.3 24.1 2 grms Silicon connected Each Cube 265 D	3635 3636	1147 1167	480 623	500 660	197 207	697 300	767 473	250 267
Dup of 3635 - Except 2 grms Bi & 2 Si connected Each Cube 264 D	3637 3638	1157 1163	750 780	493 813	107 103	860 937	883 963	297 353
854 - 1123 f - 4.3 24.1 2 grms Chromium on Each Cube 263 D	3639 3640	1077 1047	1143 1118	1167 1160	253 253	1010 1023	1107 1133	250 890
Dup 3639 2 Bi 2 Cr Each Cube	3641 3642	1053 1043	1177 1180	1190 1193	347 297			

2)2642 132 2)2696 1348

Note.

									15d	½	H
Goldstein 445 Ni(OH)2 4.27.3 - with Cobalt in it 254 D 7.790 1% Cobalt in green 7.750	3643	1043	1370	1393	423	1410	1447	420	1400	1417	587
	3644	1050	1390	1400	417	1440	1453	407	1413	1443	573
854 - 4.3 24.1 2 grms Manganese ~~to~~ on Each Cube 262 D	3645	1150	1330	1340	533	1250	1270	493			
	3646	1143	1253	1263	470	1133	1153	453			
Dup 3645 - 2 grms Bi 2 grm Mn on Each Cube 267 D	3647	1167	1290	1300	427	1253	1277	473			
	3648	1143	1213	1240	390	1177	1193	420			
854 - 1123 f 43 24.1 put up with Irons from Hollands last cells 1799-1800 259 D 7.479	3649	1183	1243	1257	463	1220	1233	487	1200	1220	417
			1193	1207	387	1173	1190	433			
			1190	1197	387	1173	1190	490			
Dup of 3649 Except used Irons from Hollands 1801-02, 260 D 7.457	3650	1123	1247	1260	403	1227	1253	540	1177	1193	408
			1260	1270	383	1240	1260	553			
			1243	1357	430	1310	1340	627			
Dup of 3649 Except from Hollands last Cells 1803-04 - 262 D 7.499	3651	1123	1273	1283	380	1253	1270	527	1173	1193	417
			1220	1240	410	1213	1230	523	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
			1330	1343	500	1277	1300	527			
Ditto 1805-06	3652	1177	1237	1247	460	1230	1253	517	1247	1283	500
Ditto 1807-08	3653	1173	1260	1267	500	1250	1267	537	1223	1263	500
Ditto 1809-10	3654	1200	1247	1257	473	1247	1263	520	1330	1383	543
	3655	1163							1260	1293	437
854 - use irons made at Balty works not charged or treated in any form Six cells	3656	1133							1240	1260	423
	3657	1170							1310	1330	480
	3658	1120							1267	1287	480
	3659	1127							1283	1310	497
	3660	1133							1267	1297	470

belongs here

Note

Burst in 2 places -

	200							350	½	14
3643	1417	1430	570	1413	1450	927	1410	1333	1397	630
3644	1427	1477	570	1417	1447	903	1380x	1260x	1333	580

3649
50
51
52
53
54

Goldstein 450 NiOH with Vanadium 1123 f 4 – 26.8 8088 270 D 8048 Drying then f Temp	3661 3662	1207 1037		1293 1250	1313 1270	410 330	1317 1257	1360 1310	410 380			
Goldstein 451 NiOH with Vanadium 269 D 8070 8010 Heavy dark green 4 f 26.9	3663 3664	1227 1227		1286 1307	1310 1327	480 423	1300 1313	1353 1367	467 527	1340 1353	1373 1393	427 430
Goldstein 452 NiOH with Vanadium 264 D 7996 7923	3665 3666	1133 1133		933 867	1243 1233	310 310	860 800	1283 1273	407 397			
Goldstein 453 NiOH with Vanadium 253 D 7450 4. 26.7 dark green 7458	3667 3668	1053 1033		583 583	1223 1193	307 293	note	Vanadium Bad				
Goldstein 446 NiOH, with Iron in it, 269 D 8026 1/10% 8047	3669 3670	1280 1257		1337 1337	1353 1353	357 333	1340 1350	1360 1377	407 387	1360 1360	1377 1380	403 403
Goldstein 447 NiOH with Iron in it 261 D 7869 dark green 2/10% 7801	3671 3672	1277 1243		1313 1307	1327 1327	360 397	1317 1317	1330 1350	383 480	1330 1330	1340 1347	397 400
Goldstein 454 NiOH. with arsenic in it. 8254 27. 277 D 8331	3673 3674	1167 1193		1263 1287	1300 1300	420 420	1300 1313	1327 1333	590 657	1343 1357	1377 1383	470 477
Goldstein 448 NiOH with Iron in it 260 D 7919 1/2% 7895	3675 3676	1227 1193		1283 1353	1293 1267	380 377	1287 1243	1317 1263	580 500	1327 1267	1347 1290	513 473

nato Low

3663	1323	1333	387
3664	1320	1330	397
3669	1330	1343	457
3670	1340	1350	463
3671	1317	1327	463
3672	1320	1330	467
3673	1347	1367	517
3674	1357	1377	517
3675	1333	1347	497
3676	1310	1320	470

Goldstein 449 NiOH with Iron in it 241D 7237 1% . 7262	3677 3678	1197 1140		1200 1140	1217 1153	340 340	1183 1100	1193 1133	517 397	1197 1123	1217 1130	407 323
Goldstein 455 NiOH with Arsenic in 267D 8116 8194	3679 3680	1177 1177		1277 1303	1290 1317	393 397	1300 1323	1323 1353	600 623	1297 1307	1317 1323	507 507
Goldstein 456 NiOH with Arsenic in 7573 250D 7573	3681 3682	1243 1230		1303 1297	1317 1310	367 413	1303 1287	1327 1317	573 593	1293 1290	1320 1313	400 510
Goldstein 457 NiOH with Arsenic in 7928 264D 7953	3683 3684	1180 1193		1263 1290	1280 1300	390 377	1283 1317	1317 1330	560 553	1287 1307	1323 1330	530 587
Lot 36 Ni flake 1129 (1164 Dump 9 Clauf-T 264D ~~267~~ 7914 27- 4=2 7902	3685 3686	1273 1283		1327 1327	1333 1337	393 363						
Lot 36 f 854 - 270D 7454 ~~[illegible]~~ 417 - 239. 7515	3687 3688	1260 1243		1303 1267	1350 1287	417 343						
Goldstein 458 NiOH with Titanium in it 273 4 6984 228D 7002 Bulky	3689 3690	1260 1257	5	1257 1227	1270 1253	337 337	1247 1233	1270 1253	537 507	1237 1233	1257 1250	513 513
Goldstein 459 - NiOH with Titanium in it - 8151 271D 8135	3691 3692	1197 1157		1267 1230	1283 1247	340 283						

Note burst 1164 cant stand up to high loading 101

			50			100			150		
Goldstein 460 NaOH with Titanium unit 271D 8232 8240	3693 3694	1230 1157	1287 1240	1303 1253	327 293	0					
Goldstein 461 NaOH with Titanium unit 245D 7547 7510	3695 3696	1193 1230	1273 1290	1290 1310	363 433	1303 1310	1323 1327	440 430	1327 1320	1340 1333	500 517
1129 (1164) Except with 20% Anhydrous BISMUTH oxide thru 50 on 190 4.6 27.1 283D 5963 grav 8542 8589	3697 3698	1287 1233	1413 1530	1440 1550	893 607	1720 1657	1730 1670	863 863	1747 1687	1767 1737	977 973
Dup 3697 Except mixed with 30% anhyd Bismuth Oxide thru 50 on 190 8887 8974 4.27 296D damp & then f	3699 3700	1247 1253	1450 1443	1457 1453	850 863	1605 1603	1610 1617	780 763	1627 1600	1653 1650	887 973
RA 1129 (1164) mixed with 50% anhy B.O thru 50 on 190 303D 27 damp & then f - 9747 slightly bulky sticky in slides - 9866	3701 3702	993 1027	1133 1160	1157 1167	560 663	1210 1207	1313 1333	513 553	1093 1183	1313 1343	887 977
854 mixed with 20% B.O anhy thru 50 on 190 8120 4.3 24.1 314D 8152	3703 3704	1237 1223	1430 1433	1437 1460	1043 843	1603 1603	1610 1613	783 737	1557 1600	1590 1633	840 850

Note 1164 cantsland A

				250		
3695	1313	1327	490		Burst 3 places	
3696	1327	1333	467			
3697	1753	1787	470	1573	1630	983
3698	1637	1680	930	1533 x	1627	967
					burst 1 place	
3699	1553	1920	720	1457 x	1687	893
3700	1573	1690	950	1333	1717	910
3703	1683	1767	767	1567	1690	923
3704	1647	1707	730	1503	1600	867

300°	1/2	14	350		
1650	1707	807	1567	1663	807
1627	1687	837	1397	1567	783

Slightly bent —

h	400	½	1T			
3703	1467	1783	980	1267	1687	960
3704	1417	1677	847	1387	1630	923

500		
1400	1667	804
1430	1093	1047

			K			100					
Dup of 3703 Except mixed with 30% B.O Anhy 314 D 8486 8604	3705 3706	1167 1130	1333 1310	1350 1327	920 913	1550 1450	1563 1487	717 607	1400 1353	1530 1457	700 707
Dup 3703 Except mixed with 50% B.O Anhyd thru 50 on 190 353 D 9678 9588	3707 3708	937 930	~~1093~~ ~~1093~~	~~1117~~ ~~1117~~	~~440~~ ~~437~~	~~1100~~ ~~1130~~	~~1197~~ ~~1147~~	~~430~~ ~~437~~	~~933~~ ~~943~~	~~1223~~ ~~1197~~	~~453~~ ~~447~~
854 1123f 4.3 23.9 dissolved wire carefully 21K 2Li 1 Milg Aluminum dissolved in Electrolyte 7525 268 D 7388	3709 3710	1217 1177	~~1243~~ ~~1217~~	~~1253~~ ~~1223~~	~~437~~ ~~380~~	~~1250~~ ~~1210~~	~~1267~~ ~~1227~~	~~450~~ ~~393~~	~~1250~~ ~~1200~~	~~1263~~ ~~1217~~	~~610~~ ~~560~~
Dup 3709 Except 3 Milg Aluminum	3711 3712	1227 1213	~~1220~~ ~~1233~~	~~1227~~ ~~1243~~	~~380~~ ~~433~~	~~1220~~ ~~1243~~	~~1237~~ ~~1257~~	~~427~~ ~~427~~	~~1213~~ ~~1213~~	~~1233~~ ~~1217~~	~~610~~ ~~560~~
Dup 3709 Except 9 Milg Aluminum	3713 3714	1[illegible]7 1237 1197	~~1240~~ ~~1230~~	~~1247~~ ~~1233~~	~~520~~ ~~563~~	~~1237~~ ~~1227~~	~~1250~~ ~~1250~~	~~457~~ ~~450~~	~~1217~~ ~~1213~~	~~1243~~ ~~1217~~	~~577~~ ~~547~~
Dup 3709 Except 27 Milg Aluminum	3715 3716	11 1190 1197	1173 1183	1183 1190	270 270	1137 1120	1193 1130	440 397	1113 1110	1127 1123	543 487
Dup 3709 Except 81 Milg Aluminum	3717 3718	1173 1197	1113 1177	1127 1183	277 333	1057 1067	1063 1110	430 480			

Note

3705	1267	1887	667	1073	1600	790
8706	1200	1847	553	977	1643	767

3715	1067	1130	653
3716	1097	1140	633

LONG TUBES

		·9 900	1/2	H	950	1/2	H
Tubes from Rogers Flake 27 730 green 8 Rmp 21K2Li	10262	1383	1513	1008	1313	1408	1045
	10263	1271	1354	1004	1217	1321	1035
Rogers tubes Flake 34 730 green 21K2Li	10277	1415	1633	1013	1450	1613	1030
	10278	1388	1558	1029	1488	1621	1035
	10279	1404	1646	1021	1467	1642	910
Dup 10277 Flake 35 730 green	10280	1496	1658	1013	1725	1788	910
	10281	1617	1696	1083	1725	1817	980
	10282	1467	1558	992	1579	1667	925
Tubes fm Monahan flake oxidized + run thru hydrogen + flat. 15A 732 green	10286	450 1150	1271	963	800 1225	1333	930
	10287	1300	1467	996	1313	1467	945
	10288	1325	1496	1033	1396	1546	960
3 tubes machined Batcokes Solid Ends -	10308	700 1642	1771	1000	1667	1805	1055
	10309	1633	1772	1042	1633	1754	1070
	10310	1688	1792	988	1638	1796	1085
Dup 10308 Except hollow cupped ends	10311	1688	1854	1029	1696	1875	1065
	10312	1675	1750	1025	1646	1767	990
	10313	1663	1775	1004	1675	1821	1025
green 739 thru 30 on 190 lot 150 Stock 28 Nif [illegible] new automatic loading mac revolving funnel on from SB ukes 10556 357 D 10538	10340	600 1696	1754	913	650 1704	1792	937
	10341	1692	1808	917	1750	1863	995

~~1208~~

	1050			1100				1150					
10280	1500	1579	892	1546	1608	929		1317	1392	988	1075	1108	855
10281	1467	1571	942	167	1667	988		1400	1467	938	1267	1333	880
10283	1300	1373	900	1538	1604	913		1279	1375	933	1067	1104	815
	880			900				950			1000	½	H
10308	1538	1658	996	1671	1729	1042		1458	1500	1025	1288	1333	895
10309	1542	1625	1027	1658	1725	1058		1429	1500	1033	1288	1333	905
10310	1517	1663	1038	1646	1733	1063		1425	1508	1021	1271	1333	920
											1,000	½	14
10311	1642	1800	1075	1733	1800	1092		1542	1667	979	1367	1425	915
10312	1542	1704	977	1746	1838	1033		1575	1658	992	1338	1400	930
10313	1575	1708	988	1750	1800	996		1550	1658	1013	1400	1438	925
	750			800				850			900	½	14
10340	1663	1729	929	1733	1842	950		1550	1658	925	1488	1550	940
10341	1663	1813	967	1733	1871	1038		1575	1667	983	1475	1521	945

	1250			1300	1/2	H	1350	1/2	H
10280	1005	1058	896	975	1000	667	917	979	746
10281	1150	1208	942	1083	1146	908	1108	1238	817
10282	1004	1058	892	1000	1058	688	1008	1040	783
	1050	1/2	H	1100	1/2	H	1150	1/2	H
10308	1288	1313	950	1238	1208	754	1250	1283	850
10309	1304	1329	1021	1263	1313	783	1271	1308	821
10310	1250	1304	979	1200	1250	754	1179	1229	842
10311	1329	1392	992	1263	1392	804	1283	1379	925
10312	1329	1396	1075	1292	1350	808	1304	1358	967
10313	1375	1413	1025	1304	1408	808	1400	1438	857
	950	1/2	H				1000	1/2	H
10340	1442	1521	958	1325	1475	775	1292	1471	917
10341	1467	1533	996	1321	1417	829	1358	1413	900

about 90 deg higher at 9 than 1 Volt.

			500	½	H	550	½	H			
Long tubes rings put on with Graphite		10342	1463	1554	908	1529	1638	905			
		10343	1517	1583	913	1558	1638	905			
after 50 Runs — 21K2Li Change to plain 21 K only		10344	1563	1663	921	1563	1692	940			
2 lb Lot Bismuth treated flake		10345	450 1792	1896	1183	500 1692	1813	1155			
21K2Li 369D 10876 10876		10346	1646	1763	1271	1500	1617	1185			
Dup 3709	3719	1180	933	953	297	800	813	357	DCo		
Except 243 mlg Alum	3720	1180	980	1020	310	800	827	357			
854 mixed with 3% Bismuth Metal	3745	1183	1297	1307	617	1310	1320	587	1333	1363	690
thru 100 mesh in 1123f 4.3 23.8 274D .7625 .7650	3746	1213	1287	1300	637	1327	1337	623	1300	1323	687
Dup of 3745 Except 6% of	3747	1207	1450	1470	993	1550	1573	753	1600	1627	953
Metal Bismuth thru 100 mixed in 4.3 24.2 .281D 7818 7835	3748	1203	1470	1483	847	1530	1547	833	1573	1587	967
Dup of 3745 - Except 10% Metal Bismuth thru 100 mesh in mixed	3749	1167	1470	1487	850	1540	1567	857	1593	1623	967
with 854 - 4.3 23.8 282D 7824 7861	3750	1193	1463	1477	910	1547	1570	880	1620	1633	983

probably more than 6% sifts thru in hopper

	650			900			750			740 S		
10342	1467	1529	975	1558	1625	975	1433	1488	950	1229	1267	885
10343	1500	1579	988	1550	1613	979	1383	1475	958	1229	1250	885
10344	1517	1583	996	1533	1625	1043	1379	1463	988	1233	1275	900
	600			650			700			700		
10345	1650	1742	1183	1717	1842	1225	1575	1729	1242	1425	1575	1175
10346	1508	1596	1350	1604	1692	1308	1333	1417	1138	1150	1250	985
3745	1387	1410	777									
3746	1333	1400	713									
				250						350	½	ct
3747	1570	1613	977	1560	1593	903	1520	1590	1047	1530	1613	940
3748	1577	1623	1030	1517	1513	1517	1457	1533	927	1473	1550	897
3749	1570	1617	1060	1573	1593	973	1530	1597	1057	1543	1633	937
3750	1570	1630	1070	1560	1620	1560	1547	1627	1067	1547	1640	970

	850	1/2	H	900	1/2	H
10342	1258	1283	938	1167	1192	746.
10343	1229	1250	950	1167	1192	467
10344	1183	1254	958	1158	1208	692
	800	1/2	H			
10345	1388	1554	1104	1296	1446	942
10346	1063	1096	1125	1113	1158	950

1142	1213	829
1171	1196	808
1163	1188	846
1192	1314	1113
888	900	929

	400					
3747	1493	1573	997	1453	1570	997
3748	1433	1533	977	1457	1567	947
3749	1493	1560	1020	1467	1567	953
3750	1447	1557	993	1397	1533	923

See archer

Dup 3745 with 15% Metal Bismuth in green. 4.3 24.2 298D	8336 8312	3751 3752	1163 1157	1517 1523	1530 1537	667 730	1613 1673	1627 1683	730 807	1590 1647	1617 1687	883 1110
37 Ni flake 854 - 5 f 24.2 260D	7444 7472	3753 3754	1203 1227	1250 1310	1263 1323	403 517						
37 f Ra 1164 - 4.7 27. 257D	7903 7803	3755 3756	1237 1240	1323 1293	1347 1307	437 437						
854 powdered thru 190 mesh reground finer. mixed 3% of it with Fe mix, made Fe pkts 6 grms says run as a Ni it should be run as Fe, want reanalysis the Al in Fe —	7508 7466-	3757 3758	1183 1167	1273 1257	1283 1267	387 380	1250 1220	1267 1237	443 400	Runs as Fe		
Dup of 3757 Except 5% MnO₂ in Fe pockets - .		3759 3760	1163 1160	1223 1207	1230 1217	360 360	C					
Dup 3757 Except 10% nickel in Fe pocket,		3761 3762	1180 1173	1217 1217	1230 1227	390 490	1200 1197	1237 1250	403 403			
854 - put 4 grms powdered fire brick in Electrolyte Each cell - thru 190 mesh		3769 3770	1180 1197	1190 1167	1200 1177	590 560	1130 1123	1197 1133	423 417	1123 1140	1147 1163	703 817
854 - pickup with irons that have 10% powdered fire brick mixed with Fe 6 grm pkts		3771 3772	1143 1180	1057 1093	1063 1103	390 467	1043 1097	1053 1127	373 420	1040 1063	1053 1087	547 633

				250						340	½	H
3751	1530	1557	1127	(1613)	1640	773	1560	1593	873	1540	1600	733x
3752	1420	1620	1133	1560	1663	923	1447	1617	1200	1427	1697	970x

Slightly bent

3769	1170	267	663	0
3770	[illegible]	257	657	
3771	1000	1093	583	0
3772	1043	1107	657	

Slightly bent

	400	1/2	ft			
3751	1610 x	1677	1007	1490	1617	840
3752	1533 x	1700	997	1490	1660	890

500	1/2	ft
1383 x	1547	793
1400 x	1583	843

burst ! plane bad bent
" " "

854 mixed with 10% powdered quartz thru 100 fines all in 253 D 7382 7486	3779 3780	957 900	1037 1033	1043 1040	440 417	1110 1113	1120 1123	447 447	1127 1120	1150 1133	633 567
854 mixed with 10% Ni peroxide anhydrous made by Goldstein 273 D 7651 7632	3781 3782	1117 1113	1217 1187	1237 1197	447 420	1240 1210	1257 1220	453 440			
734 Containing 16.8% Bi put in tube without flake 334 D 7616	3783	67	103 —			given to Holland to reverse & run			Cu		
854 mixed with 10% Bi Oxide made by Goldstein - thru 100 fines all in to the BiO - 275 D 7640 7703	3784 3785	1207 1207	1367 1447	1377 1457	760 693	1423 1490	1437 1500	733 993	1433 1527	1453 1550	823 930
854 2 grms Zinc Connected to Each tube —	3786 3787	1140 1147	1090 1093	1100 1103	500 597	1200 1140	1210 1197	500 460			
Dup 3786 Except 2 grms Zinc & 2 grms Bismuth Connected to Each tube	3788 3789	1160 1170	1120 1090	1127 1100	547 503	1217 1140	1223 1197	437 423			
854 mixed with 10% anhyd BiOX thru 100 fines all in 3½ f 3.6 f 23.9 gr 275 D 7690 7653	3802 3803	1270 1270	1487 1517	1500 1550	890 887	1563 1567	1587 1613	863 860	1593 1540	1613 1593	1050 960
Dup 3802 Except 3 f - 3.1 f 23.9 282 D 7530 7538	3804 3805	1307 1287	1563 1533	1577 1560	903 1067	1540 1577	1577 1600	653 990	1577 1527	1600 1567	727 960

3784	1420	1490	893	0									
3785	1467	1557	967										
				250						340			
3802	1510	1563	970	1533	1627	913	1490	1557	1047	1530	1600	993	0
3803	1517	1587	967	1487	1640	950	1450	1523	1027	1477	1557	947	
				250									
3804	1523	1590	1033	1480	1543	917	1353	1440	913	1420	1487	900	0
3805	1400	1433	1073	1480	1543	917	1353	1413	920	1443	1497	940	

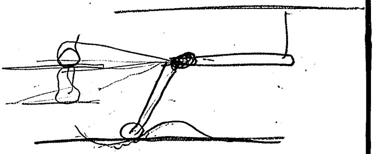
Dup 3802 Except 2 f — 2.3 23.9 282 D 7593 7681 flake doent feed good Opening too small.	3806 3807	1180 1197	1467 1380	1507 1407	883 823	1443 1460	1457 1433	720 617	1197 1133	1233 1170	763 727
Dup 3802 Except 1 f. 1.1 23.9 297 D 7370 7404 flake dont feed good.	3808 3809	757 527	1003 790	1067 800	797 750	943 800	1033 867	507 523	Not Enough flake One bad feed [illegible]		
854 mixed with 5% Ally B.OX [illegible] 100 f [illegible] – made by [illegible] 1 f. 1.1 23.8 7109 7071 flake feeds bad	3810 3811	567 577	607 510	633 523	560 417	770 577	783 590	433 207	ditto		
Dup 3810 Except 2 f pendump 2.2 23.8 287 D 7254 7169 opening too small to feed good	3812 3813	1260 1197	1410 1267	1433 1307	637 537	1383 1227	1427 1290	480 680	1333 1133	1400 1210	880 860
Dup 3810 3 f pendump 284 D 7392 7382	3814 3815	1287 1273	1460 1463	1480 1490	630 730	1467 1440	1490 1460	817 763	1500 1473	1533 1517	893 870
Dup 3810 3½ f 3.6 23.8 278 D 7502 7526	3816 3817	1277 1263	1543 1537	1580 1560	913 800	1530 1533	1560 1560	957 1010	1583 1587	1600 1600	947 947
Dup 3810 4 f 4.3 23.8 272 D 7697 7609	3818 3819	1227 1223	1467 1400	1483 1423	793 780	1513 1417	1530 1433	847 800	1573 1587	1593 1463	940 827
854 – 1123 f – 2 grms Metal Molybdenum 4.3 23.9 to Each tube 7400 269 D 7377	3820 3821	1123 1133	1223 1177	1287 1307	313 313						
Dup 3820 Except 2 grms Bi + 2 grms Mo to Each tube	3822 3823	1133 1110	1227 1200	1280 1300	323 338						

				250		
3814	1447	1533	907	1307	1440	857
3815	1427	1510	953	1233	1350	767
3816	1523	1593	1023	1200 Ba 72 +	1493	933
3817	1527	1567	963	1533	1620	900
3818	1497	1580	1000	1440	1600	900
3819	1433	1500	910	1290 [illegible]	1427	750

3 00

~~1300~~	~~1383~~	~~870~~			
~~1200~~	~~1317~~	~~827~~			
~~1260~~	~~1377~~	~~917~~	~~1360~~	~~1500~~	~~983~~
~~1493~~	~~1553~~	~~867~~	~~1517~~	~~1560~~	~~930~~
~~1413~~	~~1527~~	~~937~~	~~1443~~	~~1510~~	~~873~~
~~1290~~	~~1427~~	~~860~~	~~1520~~	~~1577~~	~~893~~

3818	1400	1513	863
19	1360	1450	823

RA 1287 Expmt 35% by bulk llum 190 -	7540 7491	3824 3825	1147 1133	1213 1170	1227 1180	290 310	1163 1130	1177 1133	410 410			
Lot 38 Ni Flake 854 - 4.5 23.8 268D	7506 7444	3826 3827	1230 1223	1240 1217	1257 1233	367 367						
Dup with 1164 4.1 27 263D	7935 7876	3828 3829	1257 1263	1253 1267	1260 1283	373 353						
854 - 2 grms Tellurium connected Each tube 271D	7471 7454	3830 3831	1213 1240	1300 1230	1317 1240	330 337	1117 1000	1123 1117	297 100	1120 1120	1133 1133	410 377
Dup 3830 but 2 Bi + 2 Te connected Each tube —		3832 3833	1213 1200	1300 1290	1310 1300	337 340	1130 1130	1140 1140	323 407	1173 1177	1183 1187	417 417
854 — 2 grms powdered Tungsten metal connected Each tube 274D		3834 3835	1210 1210	1197 1290	1207 1300	343 407	1197 1257	1207 1273	477 567			
Dup 3834 2 grms Bi 2 grm Ws to Each tube —		3836 3837	1207 1197	1243 1240	1267 1257	407 377	1233 1230	1247 1243	553 557			
854 2 grms Vanadium & iron alloy to Each tube		3838 3839	119 115	610 610	1457 1377	377 380						
Dup 3838 2 Bi + 2 Va Fe alloy Each tube —		3840 3841	1180 1150	607 610	1433 1393	393 340